

Please amend the instant application as follows:

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A mobile node supporting router comprising:
a home link interface connected to a home link of a mobile node; and
a foreign link interface connected to a foreign link of the node;
the foreign link interface having an encapsulating cache for storing binding information of the node and a processor for encapsulating a packet addressed to the node with a care-of address included in the binding information,

wherein

the binding information comprises information associating a home address of the node with a care-of address at a time of moving, and

the binding information associates an output interface which outputs the encapsulated packet with the care-of address.

Claims 2 – 3 (Cancelled)

4.(Original) The mobile node supporting router as claimed in claim 1 wherein the binding information includes a lifetime of the binding information itself.

5. (Original) The mobile node supporting router as claimed in claim 1 wherein the processor transmits the encapsulated packet to an output interface through a packet transfer route.

6. (Currently Amended) The mobile node supporting router as claimed in claim 3¹ wherein the processor provides the encapsulated packet to the output interface.

7. (Original) The mobile node supporting router as claimed in claim 1 wherein when receiving a binding demand packet from the node, the processor stores the binding information included in the binding demand packet in the encapsulating cache.

8. (Original) The mobile node supporting router as claimed in claim 7 wherein the processor provides a binding reply packet for the binding demand packet to an output interface through a packet transfer route.

9. (Original) The mobile node supporting router as claimed in claim 7 wherein the encapsulating cache stores an output interface for outputting the binding reply packet in association with a care-of address of the node within the binding information, and

the processor provides the binding reply packet to the output interface based on the binding information.

10. (Original) The mobile node supporting router as claimed in claim 1 wherein when the encapsulating cache does not store the binding information of the node upon receiving a packet associated with the node, the processor acquires the binding information from a home agent.

11. (Original) The mobile node supporting router as claimed in claim 10 wherein the packet associated with the node comprises a packet addressed to the node.

12. (Original) The mobile node supporting router as claimed in claim 10 wherein the packet associated with the node comprises a binding demand packet from the node.

13. (Original) The mobile node supporting router as claimed in claim 10 wherein the processor notifies the home agent, by a request message, that the processor does not store the binding information.

14. (Original) The mobile node supporting router as claimed in claim 10 wherein the processor notifies the home agent, through a packet transfer route by assigning to the packet an identifier of a foreign link interface to which the processor itself belongs, that the processor does not store the binding information.

15. (Original) The mobile node supporting router as claimed in claim 10 wherein the processor acquires the binding information from the home agent through an in-device control route.

16. (Original) The mobile node supporting router as claimed in claim 10 wherein the processor acquires necessary information from a routing table through an in-device control route.

17. (Original) The mobile node supporting router as claimed in claim 10 wherein when receiving a notification that the encapsulating cache does not store the binding information, the home agent notifies necessary information to the processor from a binding cache held by the home agent itself.

18. (Original) The mobile node supporting router as claimed in claim 17 wherein the home agent notifies the binding information by a reply message through a packet transfer route.

19. (Original) The mobile node supporting router as claimed in claim 17 wherein the home agent notifies the binding information through an in-device control route.

20. (Original) The mobile node supporting router as claimed in claim 10 wherein when the notification is performed by an identifier of an output interface, the home agent notifies the binding information to which an identifier of an output interface to which the home agent itself belongs is assigned.

21. (Original) The mobile node supporting router as claimed in claim 17 wherein the home agent preliminarily stores a foreign link interface to which the notification has been transmitted, so that upon receiving a binding demand packet from the node, the home agent transmits binding information included in the binding demand packet to the stored foreign link interface.

22. (Original) A mobile node supporting router comprising:

a home link interface connected to a home link of a mobile node; and

a foreign link interface connected to a foreign link of the node;

the foreign link interface including a processor for exchanging mobile IP messages instead of a home agent of the node and a cache for storing binding information of the node included in the mobile IP message.

23. (Original) The mobile node supporting router as claimed in claim 22 wherein the mobile IP message comprises a binding demand packet received from the node and a binding reply packet which responds to the binding demand packet.

24. (Original) The mobile node supporting router as claimed in claim 22 wherein when receiving information necessary for updating binding information which a binding cache of the home agent stores by the mobile IP message, the processor transmits the necessary information to the home agent.

25. (Previously Presented) The mobile node supporting router as claimed in claim 1 wherein the home agent is at least either on the home link or included in the home link interface.